

REMARKS

The present communication is responsive to the Official Action mailed November 12, 2004. A petition for a one-month extension of the term for response to said Official Action, to and including March 12, 2005, is transmitted herewith.

Claims 1-16 were pending in this application. Claim 15 has been amended to place it in a proper dependent form and not to narrow the scope or meaning of the terms of the claims. New claims 17-22 have been added. Applicants submit that new claims 17-22 are supported throughout the present disclosure; therefore, no new matter is introduced. Upon entry of this amendment, claims 1-22 are pending in the application, and are respectfully submitted for the Examiner's favorable reconsideration.

By the present amendment, Applicants have corrected the title of the invention from "Immidazoline Quats" to -- Imidazoline Quats -- as requested by the Examiner. (*Emphasis added.*) (See 11/12/04 Official Action at 2.) Applicants also submit herewith a Supplemental Application Data Sheet in this regard.

The Examiner has objected to claim 5 as allegedly being an improper dependent claim, because claim 5 recites "the same limitations as claim 4, from which it depends." (See 11/12/04 Official Action at 2.) Applicants respectfully traverse this objection. Currently, claims 4 and 5 read as follows:

4. The mixed composition of claim 3, wherein at least 30% of both R<sup>8</sup> and R<sup>11</sup> are C<sub>19</sub>-C<sub>29</sub> alkyl groups which may be straight, branched or cyclized, may be saturated or unsaturated and may be hydroxy substituted or unsubstituted.

5. The mixed composition of claim 4, wherein at least 30% of both  $R^8$  and  $R^{11}$  are  $C_{19-26}$  alkyl groups which may be straight, branched or cyclized, may be saturated or unsaturated and may be hydroxy substituted or unsubstituted.

As shown above, claims 4 and 5 do not recite the same limitation, but rather claim 5 properly further limits the subject matter of claim 4 from which it depends. Therefore, Applicants respectfully request that this objection be withdrawn.

**Rejection Under 35 U.S.C. § 112**

The Examiner has rejected claims 1-16 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention under 35 U.S.C. § 112, second paragraph. Specifically, the Examiner stated that "[a] recited percentage of groups  $R_8$  and  $R_{11}$  must be of a given chain length, but the R groups are not otherwise defined." The Examiner, therefore, concluded that claims are indefinite because there is no limitation as to what the other 50% or less could be. Applicants respectfully traverse this rejection.

Applicants submit that the other 50% or less of  $R^8$  and  $R^{11}$  (as stated in claim 1) are not specifically defined in the pending claims because they are not, and were not intended to be, limited. The only limitation is that a significant percentage of  $R^8$  and  $R^{11}$  be as defined and anyone of ordinary skill in the art would understand the metes and bounds of these claims. Therefore, the claim is clear.

Moreover, under the claim differentiation doctrine, the newly added claim 17 further emphasizes the fact that in claim 1, which is the broadest independent claim pending in this application, up to 50% of the  $R^8$  and  $R^{11}$  groups can be anything,

whereas in claim 17, all of the R<sup>8</sup> and R<sup>11</sup> groups must have chain lengths of C<sub>16</sub> or greater. One of skill in the art can clearly understand both the nature and the scope of these claims, and 35 U.S.C. § 112, second paragraph requires nothing further. In addition, Applicants would like to note that "[b]readth of a claim is not to be equated with indefiniteness." See M.P.E.P. § 2173.04 citing *In re Miller*, 441 F.2d 689, 169 U.S.P.Q. 597 (CCPA 1971).

The Examiner has also rejected claim 15 as being indefinite because the term "said solvent" lacks antecedent basis under 35 U.S.C. § 112, second paragraph. In response, Applicants have amended claim 15 to be dependent from claim 14, which comprises the term "solvent."

Thus, it is respectfully submitted that rejections under the 35 U.S.C. § 112, second paragraph, be withdrawn.

#### 35 U.S.C. § 103(a) Rejection

The Examiner has rejected claims 1-16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP 60-81376. The Examiner has also rejected claims 1-16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP 58-144174. And, finally, the Examiner has also rejected claims 1-16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Barnabas et al.*, U.S. Patent No. 5,721,205 ("Barnabas et al. '205").

The Examiner alleged that these references generically disclose classes of compounds that could encompass those claimed. The Examiner noted that although mixtures of compounds having the ratios of chain lengths recited by Applicants are not disclosed in these references, it is notoriously common in the surfactant art to use feedstocks derived from natural fats, in which a mixture of chain lengths would be present. Therefore, it is *prima facie* obvious to combine two compositions, each

taught for the same purpose, to yield a third composition for that very purpose, absent unexpected results.

These rejections under 35 U.S.C. § 103(a) set forth by the Examiner in the outstanding Official Action are largely the same as those set forth in the previous Official Action dated August 22, 2003, in the parent case involving U.S. Patent Application Serial No. 10/339,551. Applicants, therefore, incorporate by reference all of the arguments in response to such rejections as stated in the Amendment dated November 18, 2003.

Furthermore, Applicants would like to emphasize the fact that although these references could broadly encompass the use of substituted imidazolinium salts, unlike the claimed invention, they also encompass, for example, ammonium quats salts, tertiary amine salts, alkylpyridinium salts, and alkanamide alkylene pyradinium salts. Moreover, their disclosures are overwhelmingly devoted to fabric softening compositions. They do not provide a specific teaching of a personal care or cosmetic composition containing substituted imidazolinium salts.

In fact, the only reference of the three which suggests a personal care product (i.e., hair rinse) is JP 58-144174. Yet, that disclosure is only exemplified using dialkyl **ammonium salts** (i.e., branched dialkyl methyl ammonium chloride and dihydrogenated beef tallow alkyl dimethyl ammonium chloride) as ingredients, not a dialkyl **imidazolinium salt**. There is no similar disclosure in both JP 60-81376 and *Barnabas et al.* '205. Thus, none of the references, alone or in combination, teach a personal care product which includes an imidazolinium salt.

Even though Example 3 of the JP 58-144174 discloses a composition with R groups derived from beef tallow as the Examiner has suggested (i.e., dihydrogenated beef tallow alkyl

dimethyl ammonium chloride), Applicants would like to note again that this is not an **imidazolinium salt** substituted with beef tallow, as claimed in the present application.

Moreover, there is nothing in the prior art of record to direct one to a dialkyl imidazolinium quat of the present invention having specified R groups from amongst the plethora of compounds generically encompassed by these references' teachings. The same might be said of the chain lengths. The fact that a mixed feed stock will be used and that the result might be a range of chain lengths, that is no substitute for a teaching or suggestion of using the claimed imidazoline quats with the specified groups having the specified chain lengths. Therefore, the present invention is not obvious over these references.

In order to make abundantly clear that the present invention is patentably distinct from the prior art of the record, Applicants enclose herewith a Declaration of Abel G. Pereira under 37 C.F.R. § 1.132, attached hereto as Exhibit A. Mr. Pereira's Declaration shows that the present invention is unobvious by demonstrating unexpected and superior results over the prior art.

The Federal Circuit has held that the objective evidence composed of real world facts, such as long-felt need, failure of others, and unexpected results must be considered by the Examiner during *ex parte* prosecution. *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540 (Fed. Cir. 1984). An effective declaration must include factual evidence, not merely conclusory statements or opinions, to show unexpected results. *In re Beattie*, 974 F.2d 1309 (Fed. Cir. 1992). An applicant relying upon a comparative showing to rebut a *prima facie* case of obviousness must compare his claimed invention with the closest prior art. *Ex parte Meyer*, 6 U.S.P.Q.2d 1966, 1968 (Bd. Pat. App. & Int. 1988).

Indeed, the Examiner invited the submission of this data in the last Official Action by stating that "[w]hen ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results." (See 11/12/04 Official Action at 4.) The present invention is clearly not obvious for the reasons discussed above, but also because it achieves superior and unexpected results over the closest prior art based on the comparative experimentation data provided in Mr. Pereira's Declaration. (See Exh. A hereto.)

Mr. Pereira is one of the inventors of the present application and is experienced with the chemistry involving imidazoline quats in general, and in particular with preparation of personal care and cosmetic products including same.

Mr. Periera has also reviewed the Official Action mailed November 12, 2004, and the references cited therein including Japanese references JP 60-81376 and JP 58-144174, and *Barnabas et al.* '205.

Mr. Pereira prepared the closest prior art formulation, which is the hair rinse formulation disclosed in Example 3 of the JP 58-144174 and the corresponding formulation recited in claim 1 of the present application, and compared their properties by measuring the viscosity and reduction in combing force. (See Exh. A, ¶¶ 5-21.) The formulations and their preparation were identical to the extent possible, except for the use of dialkyl ammonium salts verses imidazoline quats of this invention, or as otherwise indicated.

Surprisingly, the viscosity of the formulation of the present invention was over 20,000% higher than that of the prior art formulation. But more importantly, the prior art formulation had viscosity of 275 centipose, which is below the preferred viscosity range for use in personal care products. (See Exh. A, ¶¶ 11-15.)

At 275 centipoise, the resulting prior art formulation is a free flowing liquid that will run through the fingers of a cupped hand. Such characteristic is commercially undesirable for a hair care product, although desirable for a liquid fabric softener so that it is easily and quickly poured into a washing machine.

On the other hand, at 68,500 centipoise, the resulting claimed formulation has a cream-like consistency, which is a characteristic of a superior viscosity builder and emulsifying conditioner for hair.

Furthermore, the formulation of the present invention clearly outperformed the prior art formulation as a hair care product. The test was carried out by measuring the reduction in combing force by combing hair tresses, using a Dia-stron Miniature Tensile Tester, before and after the treatment with the prior art formulation and claimed formulation, respectively. Surprisingly, the reduction in combing force after the treatment with the claimed formulation was about 140% better than that disclosed in JP 58-144174. (See Exh. A, ¶¶ 16-21.)

Accordingly, Applicants respectfully submit that the enclosed Declaration of Mr. Pereira, coupled with the remarks herein and in the Amendment dated November 18, 2003, in the parent case, establish both a lack of teaching or suggestion of the present invention by showing the unobvious nature of the claimed invention and by showing unexpected and superior results over the closest prior art.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at

(908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: March 8, 2005

Respectfully submitted,

By 

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